

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/21918

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : H01L 21/00
US CL : 438/46, 481

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
U.S. : 438/46, 479, 481, 483, 484

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
NONE

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
IEEEExplore, Japanese Journal of Applied Physics

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6,413,627 B1 (MOTOKI et al) 02 July 2002 (02.07.2002), see entire document.	1-19
A,P	US 6,582,986 B2 (KONG et al) 24 June 2003 (24.06.2003), see entire document.	1-19
A,P	US 6,602,763 B2 (DAVIS et al) 05 August 2003 (05.08.2003), see entire document.	1-19
A,E	US 6,645,295 B1 (KOIKE et al) 11 November 2003 (11.11.2003), see entire document.	1-19
A	WANG et al, Crystal Tilting in the Epitaxial Laterally GaN Films on Sapphire Substrate by Hydride Vapor Phase Epitaxy. Solid-State and Integrated-Circuit Technology Proceedings 6th International Conference, October 2001, Vol. 2, pages 1198-1201.	1-19
A,P	MARUSKA et al, Development of 50 mm Diameter Non-Polar Gallium Nitride Substrates for Device Applications. International Conference on Indium Phosphide and Related Materials, 16 May 2003 (16.05.2003), pages 567-570.	1-19

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents:	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier application or patent published on or after the international filing date	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubt on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&"	document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means		
"P" document published prior to the international filing date but later than the priority date claimed		

Date of the actual completion of the international search

02 February 2004 (02.02.2004)

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